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ABSTRACT

The lessons were written to help trainer agents prepare aides for work with families in Extension's Expanded Food and Nutrition Program. The purpose is to enrich the aides' background in food preparation and to provide practical teaching methods that can be used in presenting food preparation information to families. The 21 lessons are an expansion of lessons 11-14 from Food and Nutrition Basic Lessons for Training Extension Aides. The document provides information related to the trainer agents' responsibilities and recommends resource materials. The 21 lessons cover the following areas: when and how to use a recipe; meats (moist and dry heat cookery); ground beef; organ meats; poultry; fish; eggs; nuts and peanut butter; dry beans, peas, and lentils; milk; cheese; salads, raw fruits, and vegetables; cooked vegetables (emphasis on vitamin A and C value); cooked fruit; cereal and pasta; quick breads; yeast breads; frozen desserts and salads; and the packed meal. Each lesson consists of the lesson's purpose, presentation techniques, application of lesson by aides, and reference materials for the trainer agent and aide. (BP)

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FOOD and NUTRITION...

supplemental lessons for training extension aides

APR 21 1975

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FOOD PREPARATION

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Food Preparation is one of a series of booklets of supplemental lessons in food and nutrition, designed for use with on-the-job training of Extension aides. These lessons are not intended to be complete teaching units. The purpose is to enrich the aides' background in food preparation and to provide practical teaching methods that they can use in presenting food preparation information to families. Since technical subjects in food and nutrition are simplified, some of the generalizations may have exceptions.

November 1971

FOOD AND NUTRITION

Supplemental Lessons for Training Extension Aides

FOOD PREPARATION

PURPOSE

These lessons were written to help trainer agents prepare aides for work with families in Extension's Expanded Food and Nutrition Education Program. It is important that aides understand the principles of food preparation to include nutrition, family needs and preferences as well as cost.

The lessons are an expansion of Lessons 11-14 from Food and Nutrition Basic Lessons for Training Extension Aides. The information can be adapted by the aides for work with families. It also can be used in teaching groups of adults or youth. This series should be used to supplement and reinforce the initial training given aides.

TRAINER AGENT'S RESPONSIBILITY

References are suggested for the agent's use with each lesson. The agent will find it helpful to assemble these references before starting the lessons and use them in her preparation for teaching.

References also are suggested for the aide's use. The agent should be selective in the references she gives to aides. Order those selected well in advance. Go over references thoroughly with the aides so that they know what is in each reference.

Professional people in related fields may be asked to participate in training meetings. Such participation should be planned well in advance.

Equipment and supplies used in teaching the lessons should be practical for aides' use with families. The amount of equipment and supplies should be adequate for teaching the principles of food preparation emphasized in the lessons. Aides need to be encouraged to practice these principles at home to develop skills in food preparation and management. At all times the safety of the aides in using equipment, especially stoves, must be of the utmost importance.

Use the workshop situation as much as possible in training aides. Some activities may be planned for aides to work in small groups; other activities should be planned for aides to work in pairs or alone.

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A working relationship with each aide should already be established as a result of the initial training period. Effective communication remains vital in teaching. Before teaching supplemental lessons, the trainer agent may wish to review purposes of the training and the importance of aides' participation.

Suggested check list to be sure that all necessary preparations for the in-service training sessions have been made:

- Meeting place with necessary facilities has been obtained.
- References needed to teach the lessons have been assembled.
- Visual materials, equipment, and food supplies needed to teach the lessons are on hand.
- Reference materials needed for the aides have been obtained.
- Lesson plans have been carefully studied so that you know what is included and can state objectives for each lesson.
- Plans include participation of the aides with each lesson.
- Sufficient time has been allowed to teach each lesson and permit aides to consider the information presented.

ADAPTING THE LESSONS TO YOUR AIDES

Guides used in teaching the basic lessons should be followed in teaching the supplemental lessons.

Adapt training classes to meet the needs of your group. Here are some ideas to keep in mind:

1. Simplify. Do not try to cover too much material in one lesson. Pick out the most important points and emphasize them.
2. Use colorful visuals and a dynamic presentation to help make the lesson more appealing.
3. Emphasize the good nutrition in the food the aides are now eating. Point out how small changes can often result in a more balanced diet.

4. Involve the aides in the training meetings in as many ways as possible.

5. Use workshops in teaching skills.

EXTENDING INFORMATION

The information given in the supplemental lessons may be effectively used in other ways, such as adaptation for use in training volunteer leaders or in newsletters or newspaper articles. A series of radio or TV programs or spot announcements based on the lessons may help to extend to a larger audience the ideas that aides are promoting.

The lessons in this booklet may be adapted for extensive teaching in food preparation with any group. It is suggested that the trainer agent adapt each lesson to meet specific needs according to educational level, age, income, nutritional knowledge and attitudes, and personal motivation of the members of the group.

RECOMMENDED REFERENCES

Most lessons include a list of recommended reference books and publications for training agents to use in preparing lessons. Make sure you have the references you need to do a good job. These references will be helpful:

Consumers All, Yearbook of Agriculture, 1965. $2.75, Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

Experimental Study of Foods, Griswold, Ruth M., Houghton Mifflin Company, 2 Park Street, Boston, Mass. 02107, 1962, $9.50.

Food, Yearbook of Agriculture, 1959. $3.25, Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

Food For Us All, Yearbook of Agriculture, 1969. $3.50, Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

Foods, Vail, Griswold, Justin, and Rust, 5th Edition, Houghton Mifflin Company, 2 Park Street, Boston, Mass. 02107. $8.50.

Handbook of Food Preparation, American Home Economics Association, 2010 Massachusetts Avenue, N.W., Washington, D. C. 20036, Revised 1971. $3.00.

Meal Management, Kinder, Faye, Macmillan Co., 866 3rd Avenue, New York, N. Y. 10022, 1968. $7.95.

Foundations of Food Preparation, Peckman, 2nd Edition, Macmillan Company, 866 3rd Avenue, New York, N. Y. 10022, 1970. $8,95.

Food and Nutrition Basic Lessons for Training Extension Aides, ES, USDA. $.60.

Food and Nutrition Supplemental Lessons for Training Extension Aides, Meal Planning, ES, USDA. $.45.

Food and Nutrition Supplemental Lessons for Training Extension Aides, Key Nutrients, ES, USDA. $.45.

Food and Nutrition Supplemental Lessons for Training Extension Aides, Food Needs of Family Members, ES, USDA. $.55.

Food and Nutrition Supplemental Lessons for Training Extension Aides, Food Buying, ES, USDA. $.60.

RECOMMENDED PUBLICATIONS

Publications and visual materials are listed with each lesson. Make sure that these teaching aids are on hand before you begin teaching.

USDA Publications

Bulk quantities of USDA pamphlets are usually obtained through your State publications distribution officer.

Publications NOT available free may be purchased from Superintendent of Documents, Government Printing Office, Washington, D. C. 20402, at the prices indicated. There is a 25 percent discount for 100 or more copies on all GPO orders.

Food for Thrifty Families. *Set of publications FNS-14 - 61, $1.00 per set or $75.00 per 100 sets.
FNS-26, $3.00 for 100 copies; all others $1.00 for 100 copies.
FNS-13, Daily Food Guide, poster 22" x 28" 15¢.*

*Special Note: Free illustrated FNS flyers and the Daily Food Guide poster are available singly and in bulk quantities for educational programs relating to the U. S. Department of Agriculture's Food Stamp Program and Family Food Donation Program. Address your request to: Food and Nutrition Service, U. S. Department of Agriculture, Washington, D. C. 20250.

Family Fare. G-1.
Money-Saving Main Dishes, G-43.
Nutritive Values of Food, G-72.
Conserving the Nutritive Values in Food, G-90.
Eggs in Family Meals, G-103.
Vegetables in Family Meals, G-105.
Poultry in Family Meals, G-110.
Cheese in Family Meals, G-112.
Beef and Veal in Family Meals, G-118.
Lamb in Family Meals, G-124.
Fruits in Family Meals, G-125.
Milk in Family Meals, G-127.
Cereals and Pasta in Family Meals, G-150.
Pork in Family Meals, G-160.
Apples in Appealing Ways, G-161.
Keeping Food Safe to Eat, G-162.
Nuts in Family Meals, G-176.
How to Buy Dry Beans, Peas, and Lentils, G-177.
A Clean Refrigerator, PA-733.
Clean Dishes, PA-737.
Fruits and Vegetables, PA-749.
Get Rid of Garbage and Trash, PA-826.

State Publications
Consult your Extension nutritionist for suggestions.

Commercial Publications

Armour and Company, Consumer Service Department, P. O. 9222, Chicago, Ill. 60605.

Armour Meat Guide. Revised 1971. Free.

National Marine Fisheries Service, order from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

Fish for Compliments on a Budget, I49.49-2:9. 15¢.
Common Sense Fish Cookery, I49.49-2:13. 60¢
Let's Cook Fish, I49.49-2:8. 60¢.
How to Eye and Buy Seafood, I49.49-2:15. 30¢.

Cereal Institute, Inc., 135 South LaSalle Street, Chicago, Ill. 60603.

Cereal Cookbook. Free in limited quantity.

EKCO Housewares Company, Educational Service Department, Department FC5-71, 9234 West Belmont Avenue, Franklin Park, Ill. 60131.

All About Garnishes. 25¢.

Home Economists in Business, (AHEA) P. O. Box 178, Western Springs. Ill. 60558.

Answers to Questions Consumers Ask About Meat and Poultry. 75¢.

Hunt-Wesson, 1645 West Valencia Drive, Fullerton, California. 92634.

A Guide to Low Cost Cookery. Free for single copy.

International Milling Company, Inc., (Robin Hood), Northstar Inn, Minneapolis, Minn. 55402.

Cool Rise Method, Fact Sheet. Free.

Kellogg Company, Department of Home Economics Service, Battle Creek, Michigan. 49016.

Creative Cookery. Free.

Kraft Foods, Educational Department (SF-KSD), P. O. Box 1163, Chicago, Ill. 60690.

Salads and Dressings Educational Kit. $5.50.

National Dairy Council, 111 North Canal Street, Chicago, Illinois 60606.

A catalog is available listing current materials. Requests for materials should be sent to the local affiliated Dairy Council Unit. If there is no local unit, send orders to National Dairy Council, 111 North Canal Street, Chicago, Illinois 60606.

Buttermilk, Ice Cream, et al. Fact Sheets. Write for catalog.

National 4-H Service Committee, Inc., 59 East Van Buren Street, Chicago, Ill. 60605.

Tricks for Treats, Members' Manual 21¢; Leaders' Guide 12¢.
All American Foods, Members' Manual 22¢; Leaders' Guide 13¢.
Meals for Today The Easy Way, Members' Manual 24¢, Leaders' Guide 13¢.
Foods with an International Flavor, Members' Manual 25¢; Leaders' Guide 13¢.
Teens Entertain, Members' Manual 25¢; Leaders' Guide 10¢.

National Live Stock and Meat Board, 36 South Wabash Avenue, Chicago, Ill. 60603.

Lessons on Meat, Revised 1970. $1.00.
101 Meat Cuts. Free in limited quantity. 20¢
Specialities for Your House - with Pork. Free.
Pocket Guide to Pork. Free.
Pocket Guide to Beef. Free.

National Canners Association, 1133 20th St., N. W., Washington, D. C. 20036. 20036.

"Focus on Canned Foods" kit. Free.

National Turkey Federation, P. O. Box 69, Mount Morris, Ill. 61054.

'Homemaker's Turkey Handbook. 25¢. Twelve or more copies 20¢.
Turkey - A Food Value First. 20¢.

Pillsbury Publications, Box 60-1532, Department 400, Minneapolis, Minn. 55460.

Famous Kitchen Cook Books: Green Giant's Vegetable Cook Book. 98¢.

Poultry and Egg National Board, 18 South Michigan Avenue, Chicago, Ill. 60603.

Eggs, Basic Information for Young Homemakers Kit. $1.00, $58.00 per hundred.
Full of Flavor Chicken, S-1. $4.25 per hundred.
13 Easy Ways to Cook Eggs, E-13. $4.25 per hundred.
Omelets - Puffy, Plain or French, E-12. $4.25 per hundred.

Rice Council, P. O. Box 22802, Houston, Texas. 77027.

Educational materials currently available. Free in limited quantity.

Standard Brands, Inc., Educational Services, Box 2695, Grand Central Station, New York, N. Y. 10017.

New Treasury of Yeast Baking. 25¢.
How to Make Basic White Bread. Free.

Swift and Company, Consumer Service Department, Chicago, Ill. 60609.

Poultry Meal Planner. Free in limited quantity.

RECOMMENDED VISUALS

Slide Sets and Filmstrips

USDA

"Nonfat Dry Milk in Family Meals,"	C-78	1961	23 frames	$11.00
"Main Dishes in Family Meals,"	C-81	1961	22 frames	$11.00
"Good Meals for Busy Days,"	C-106	1963	50 frames	$11.00
"Food Value,"	C-152	1968	50 frames	$11.00
"The Basic Four Ways to Good Meals,"	C-158	1969	50 frames	$11.00
"Milk the Magnificent,"	C-161	1970	50 frames	$11.00
"Milk Basic to Good Nutrition,"	C-162	1970	50 frames	$11.00
"Recipes Using Non-Instant, Nonfat Dry Milk,"	C-169	1970	49 frames	$11.00
"How to Buy Eggs,"	C-139	1969	40 frames	$11.00

USDA slide sets may be purchased from the Photography Division, Office of Information, U. S. Department of Agriculture, Washington, D. C. 20250. Copies of the filmstrips may be ordered from Photo Lab., Inc., 3825 Georgia Avenue, N. W., Washington, D. C. 20011, for $5.50 each.

Evaporated Milk Association, 910 17th Street, S. W., Washington, D. C. 20006.

"Ground Beef - Passport to Far-Away Eating," filmstrip, with recipe booklet. Free on loan basis.

General Mills, Inc., Department 320, 400 Second Avenue, South, Minneapolis, Minn. 55440.

"Better Biscuit," filmstrip. All filmstrips are free on short-term loan basis. Each is accompanied by two student booklets. Free.
"Muffin Making," filmstrip.
"Breads You Bake With Yeast," filmstrip.

National Broiler Council, 1155 15th Street, N. W., Suite 614, Washington, D. C. 20005.

"Hooray for Chicken," filmstrip. $3.50. Available on loan basis.

"Chicken American Style," movie. Available on loan basis only.

Poultry and Egg National Board, 18 South Michigan Avenue, Chicago, Illinois. 60603.

"Eggs Basics," filmstrip. For sale only. $3.50

Phono-viewer Programs, Double Sixteen Company, 1028 College Avenue, Wheaton, Illinois. 60187. Shows are $4.00 each.

"Good Food Works For You."
"The Science of Nutrition or You Are What You Eat - Key Nutrients."

Posters and Charts

Posters and other educational materials are available from the following companies:

American Institute of Baking, 400 East Ontario Street, Chicago, Illinois. 60611.

Best Foods, Inglewood Cliffs, New Jersey 07632

Del Monte Kitchens, P. O. Box 3575, San Francisco, California 94119

Green Giant Company, Office Services Building, Le Seur, Minnesota 56058

National Dairy Council, 111 North Canal Street, Chicago, Illinois 60606

Self-Rising Flour and Corn Meal Program, Inc., 14 East Jackson Blvd., Room 1010, Chicago, Ill. 60604.

Stokely-Van Camp, Inc., P. O. Box 1995, Indianapolis, Indiana 46206.

Sunkist Growers, Inc., Box 2706, Terminal Annex, Los Angeles, California 90054.

United Fresh Fruit and Vegetable Association, 777 14th Street, N. W., Washington, D. C. 20010

FOOD PREPARATION

Lesson 1: WHEN AND HOW TO USE A RECIPE

PURPOSE

Trainer agent to help aides:

1. Make decisions to determine when recipes are needed.
2. Learn how to select and use recipes.
3. Know common food weights and measures and how to use them.
4. Learn how to judge cooking temperatures.

PRESENTATION

- Explain the purpose of the lesson to the aides.
- Discuss the advantages in using recipes. Have aides decide when a recipe should be used.
- Have aides look at recipes in USDA publications and cookbooks. List characteristics of recipes considered practical for use with program homemakers.
  - Taken from a reliable source and tested under conditions similar to situational use.
  - Easy to read and follow.
  - Uses few ingredients.
  - Uses simple measurements and methods.
  - Uses major ingredients that are low cost.
- Have aides work in small groups. Provide each group with a work area and simple recipes such as skillet cookies, toasted sandwich, or simple pudding.

Ask aides to read the recipe carefully and then to:

- Ask questions and look in cookbooks when directions are not clear.
- Check supplies to find needed ingredients.
- Find needed equipment - include equipment for dishwashing. Improvise equipment when necessary.
- Check heat source (stove, burner, open fire) to find how it is controlled.

. Ask aides to learn common food weights and measures and their abbreviations. List.

. Have aides work in pairs to make common measurements. Aides might measure ingredients as trainer agent gives instructions.

- Dry ingredients such as flour, raisins, and brown sugar.
- Soft ingredients such as fat. Point out that solid fat is not melted before measuring.
- Liquid ingredients such as water, oil, or molasses.

. Show aides how to estimate and control heat for cooking.

- Hand test for "feel" of oven temperature for "low," "moderate," and "high."
- Water drop test for skillet frying, baking, and browning (also bread cube test).
- Bubble test for boiling and simmering.
- Temperature dial reading.

. Have groups of aides prepare one recipe and serve the food.

. Show aides how to arrange and store recipes.

. Have aides discuss and then decide:

- How to wash dishes.
- How to dispose of trash and garbage.

- Ask aides to wash dishes and clean work areas.
- Encourage aides to practice to develop skills.

APPLICATION OF LESSON BY AIDES

Aides use information at home and in helping homemakers.

Aides practice to develop skills in measuring ingredients and in using recipes.

REFERENCES FOR TRAINER AGENT

1. Handbook of Food Preparation, AHEA.
2. Food For Us All, Yearbook of Agriculture, 1969, pp. 221-224.
3. Foods, Vail, Griswold, Justin, and Rust, pp. 275-279.

VISUALS AND EQUIPMENT

Food and equipment for food preparation and for practice in measuring food.

No-cost recipe files.

Examples of improvised measuring cups and spoons.

Simple recipes and cookbooks.

REFERENCES FOR AIDES

1. Family Fare, G-1, pp. 26-27.
2. A Clean Refrigerator, PA-733, USDA.
3. Clean Dishes, PA-737, USDA.

Lesson 2: MEATS - MOIST HEAT COOKERY

PURPOSE

Trainer agent to help aides:

1. Learn low-cost meats that are high in nutritive value.
2. Understand and apply the best principles of moist-heat meat cookery.
3. Learn that less tender cuts of meat can be made tender through proper handling and cooking.

PRESENTATION

- Review the nutritive contribution of meat to the diet. See Lesson 5, Food Buying Supplemental Lessons for Training Extension Aides. Use Comparison Cards and Nutritive Value of Foods as references.
- List the less tender cuts found in local markets. Use pictures and meats to teach identification of these cuts. Discuss major factors that influence the tenderness of fresh meat.
- Explain how correct cooking methods tenderize meat:
  - Soften tough protein.
  - Melt fat and make the meat seem juicier and more tender.
  - Change connective tissue to gelatin.
- Explain that moist heat may dissolve components in bone marrow.
- Discuss the effects on meats of freezing and thawing:
  - Nutrient retention.
  - Tenderization of tissue.
- Using a piece of fresh meat point out the lean muscle tissue, bone marrow, and connective tissue.

- Explain that cooking meat properly improves flavor, changes its color, and destroys organisms.

- Display a pan of cooled, simmered cooked meat. Call attention to the firm gelatin, tender lean muscle fiber, and fatty surface layer. Explain why the meat should be left in the liquid to cool.

- Discuss the basic principles of moist-heat meat cookery:

  - Generally, constant low-temperature (simmer, not boil) heat improves flavor and appearance, and lessens loss in weight and nutrients.

  - Tomato juice or vinegar may be used for a portion of the liquid for cooking. The acid in these liquids softens meat tissue.

  - The browning of meat before adding liquid develops flavor and color - exceptions are corned beef and cured meats.

  - Meat may be covered or partially covered with hot or cold liquid to assure even cooking without turning.

  - Seasonings add to variety and flavor of meats cooked in liquid. Many are common and inexpensive.

  - A close-fitting lid is used to hold in the steam. Explain that steam may tenderize and if allowed to escape, the meat will not cook evenly.

  - Whole vegetables or large pieces added just before the meat is tender give flavor to both the meat and liquid.

  - Meats cooked in liquids or steam are considered done when the muscle is fork tender and begins to pull away from the bone.

- Demonstrate the principles of moist heat cookery by preparing meats such as:

  - Beef and vegetable stew.

  - Simmered chicken.

- Braised fresh pork hocks or ribs. Mention that pounding may be used to break the tissues in some cuts before braising. Meats to be braised may be coated with flour or crumbs. Tomato juice, meat stock, and marinating liquid may be used as the liquid for cooking.

  (Note: Organ meats are included in Lesson 5.)

. Help aides arrange and garnish cooked meats attractively for serving.

. Have aides mention foods to serve with the meats to make balanced meals.

. Have aides use liquids from cooked meats in gravies or soups.

. Demonstrate or have aides use cooked meats in meat pies, meat rolls, turnovers, hash, and other dishes.

. Point out that canned meats (USDA donated and commercial) may be used in similar ways.

. Have aides draw conclusions as to cost, nutritive contribution, and family acceptability of the meats prepared.

APPLICATION OF LESSON BY AIDES

Aides use information in home practice and in helping homemakers.

Aides through home visits and by checking Food Recalls or logs find out 1) kinds of meat homemakers buy and 2) how they cook one kind, such as spareribs.

REFERENCES FOR THE TRAINER AGENT

1. Lessons on Meat. National Live Stock and Meat Board.

2. Food For Us All, Yearbook of Agriculture, 1969, USDA, pp. 110-116.

3. Handbook of Food Preparation, AHEA, pp. 67-72.

4. Beef and Veal in Family Meals, G-118, USDA.

5. Pork in Family Meals, G-160, USDA.

6. Answers to Questions Consumers Ask About Meat and Poultry, AHEA.

7. 101 Meat Cuts, National Live Stock and Meat Board.

VISUALS AND EQUIPMENT

Comparison Cards; Meat Patties, Pork Chops, Chicken, et al, National Dairy Council.

Meats, supplies and equipment for food preparation.

Pan of chilled cooked meat in the liquid in which it was cooked. (Meat and liquid to be used in this lesson in preparing meat dishes.)

Meat charts, National Live Stock and Meat Board.

REFERENCES FOR AIDES

1. Pocket Guide to Pork, American Meat Institute.
2. Pocket Guide to Beef, American Meat Institute.
3. Money-Saving Main Dishes, G-43, USDA.
4. Family Fare, G-1, USDA.
5. A Guide to Low Cost Cookery, Hunt-Wesson.
6. Canned Chopped Meat or Canned Luncheon Meat - a good choice for the thrifty family, FNS-22.
   Carne Desmenuzada Enlateda, FNS-48.
7. Beef and Pork - a good choice for the thrifty family, FNS-24.
   Carne De Res Y De Cerdo, FNS-47.
8. Poultry - a good choice for the thrifty family, FNS-28.
9. Nutritive Value of Foods, G-72, USDA.

Lesson 3: MEATS - DRY HEAT COOKERY

PURPOSE

Trainer agent to help aides:

1. Learn to recognize tender cuts of meat.
2. Understand and apply the basic principles of dry-heat meat cookery.

PRESENTATION

- Review the nutritive contribution of meat to the diet. See Lesson 5, Food Buying Supplemental Lessons For Training Extension Aides. Use Comparison Cards and Nutritive Value of Foods as references.
- Review the characteristics of tender cuts of fresh meat.
- Identify some tender cuts found in local markets. Use pictures and meat cuts. Explain why dry-heat methods of cooking are usually best for tender cuts.
- Discuss the basic principles of dry-heat meat cookery (roasting, broiling, panbroiling):
  - Protein becomes firmer (coagulates) when heated.
  - At quick, high heat coagulation occurs rapidly on the exposed surfaces of meat leaving the meat crisp and brown on the outside.
  - On prolonged high heating the meat becomes dry, tough, poorly colored, and reduced in weight.
- Demonstrate and discuss ways of tenderizing less tender cuts of meat for cooking by dry-heat methods - pounding, grinding, and use of tenderizing agents. Explain how these agents are effective tenderizers.
- Demonstrate the cooking of one or more meats by each of the dry-heat methods. Ask aides from the group to help in preparing:
  - A roast - one of the less expensive cuts.

- A panbroiled meat, such as cube steak made from chuck steak.

- An oven-broiled meat. Discuss some advantages of outdoor broiling.

  (Note: Organ meat, ground meat, and poultry are included in other lessons.)

. Discuss and demonstrate when possible:

  - The influence on cooking time by size of piece, degree of leanness, amount of bone, and temperature.

  - The use of a meat thermometer in roasting meat.

  - Other tests for doneness. Explain degrees of doneness. Discuss why fresh pork should be cooked well-done.

  - Use of practical, inexpensive equipment.

  - Heat control to give desired cooking temperature.

  - Proper handling of meats in turning and lifting.

  - Use of cooked-out juices and fats.

. Help aides serve and judge acceptability of the cooked meats.

APPLICATION OF LESSON BY AIDES

Aides encourage homemakers to prepare meats in a variety of ways.

Aides use and help homemakers understand and use basic principles of dry-heat meat cookery.

REFERENCES FOR TRAINER AGENT

1. Lessons on Meat, National Live Stock and Meat Board.

2. Food For Us All, Yearbook of Agriculture, 1969, USDA, pp. 110-116.

3. Handbook of Food Preparation, AHEA, pp. 67-72.

4. Beef and Veal in Family Meals, G-118, USDA.

5. Pork in Family Meals, G-160, USDA.

6. Answers to Questions Consumers Ask About Meat and Poultry, AHEA.

VISUALS AND EQUIPMENT

Food and equipment for food preparation.

Comparison Cards: Meat Patties, Pork Chops, Chicken, et al., National Dairy Council.

Meat Charts, National Live Stock and Meat Board.

REFERENCES FOR AIDES

1. Pocket Guide to Pork, National Live Stock and Meat Board.

2. Pocket Guide to Beef, National Live Stock and Meat Board.

3. Money-Saving Main Dishes, G-43, USDA.

4. Family Fare, G-1, USDA.

5. A Guide to Low Cost Cookery, Hunt-Wesson.

6. Canned Chopped Meat or Canned Luncheon Meat - a good choice for the thrifty family, FNS-22.
Carne Desmenuzada Enlateda, FNS-48.

7. Beef and Pork - a good choice for the thrifty family, FNS-24.
Carne De Res Y De Cerdo, FNS-47.

8. Nutritive Value of Foods, G-72, USDA.

FOOD PREPARATION

Lesson 4: GROUND BEEF

PURPOSE

Trainer agent to help aides:

1. Learn a variety of ways to use ground beef.

2. Develop skills in meat cookery. See Lessons 2 and 3.

PRESENTATION

. Ask aides to tell how ground beef is used by homemakers. Show pictures of ground beef dishes and mention important steps in their preparation.

. Discuss reasons why ground beef dishes are popular. Some reasons are

- Less expensive source of animal protein.
- Usually make a tender product; is easy to chew.
- May be quickly and easily prepared.
- Combine well with many foods.
- Have pleasing flavor.

. Show filmstrip "Ground Beef - Passport to Far-Away Eating."

. Review reasons why ground meat dishes should be tender. See Lesson 2.

- The grinding process cuts strong meat fibers.
- Acid-containing foods frequently used in ground meat dishes soften the tissue.
- The short cooking time or low heat, usually used, keeps the meat tender.

. Emphasize the principles of cooking ground meat through discussion and in food preparation.

- To cook tender ground meat handle the meat as little as possible. Excessive mixing gives a firm, seemingly less tender food.

- Since grinding breaks cell walls, meat juice escapes readily and the resultant steam cooks solid particles quickly. Overcooking causes the food to be less moist.

- Browning of lean meat in a small amount of fat adds flavor and color to ground meat dishes.

- The use of milk, egg, crumbs, and vegetables gives shape and firmness to ground meat.

. Show the difference in fat content in several types of ground meat by cooking a weighed amount of each type in the same way and measuring the fat that cooks out.

Pan-fry hamburgers patties to show:

- Draining off of accumulated fat.

- Care in handling (no masning) and in turning patties.

. Demonstrate or have aides prepare ground beef in several ways:

- Meat loaf.

- Stuffed vegetables.

- Meat and vegetable pie.

- Meat patties, plain, and with cereal or vegetables.

- Meat balls with pasta or as stew.

- Chili.

- Pizza using toasted biscuit or English type muffins.

APPLICATION OF LESSON BY AIDES

Aides use ground meat in a greater variety of ways.

Aides teach homemakers to make a variety of ground meat dishes.

REFERENCES FOR TRAINER AGENT

1. Food For Us All, Yearbook of Agriculture, pp. 115-116.

2. Foods, Vail, Griswold, Justin, and Rust, pp. 131, 230-235.

3. Standards For Meat And Poultry Products, C&MS-85, USDA.

VISUALS AND EQUIPMENT

Filmstrip "Ground Beef - Passport to Far-Away Eating," Evaporated Milk Association.

How to Make Better Burgers; poster, American Dairy Association.

REFERENCES FOR AIDES

1. Money-Saving Main Dishes, G-43. USDA.
2. Family Fare, G-1, USDA.
3. Beef and Veal in Family Meals, G-118, USDA.

Lesson 5: ORGAN MEATS (VARIETY OR SPECIALTY MEATS)

PURPOSE

Trainer agent to help aides:

1. Recognize some animal organs used for food.
2. Develop an appreciation for organ meats.
3. Learn ways to prepare and serve organ meats.

PRESENTATION

- List edible organ meats. Have aides look at pictures of organ meats to learn to identify organs and animal sources.
- Discuss the nutritive contribution of organ meats. Use Comparison Cards and Nutritive Value of Foods as references. Emphasize:
  - Bone and other waste.
  - Fat content.
  - Vitamin and mineral content.
  - High quality protein content.
- Point out that many organ meats are a good buy.
  - Some are less expensive sources of essential nutrients. Compare pork liver with beef liver using local prices.
  - They are often in less demand than other meats.
- Stress that variety meats are highly perishable. They should be cooked and served soon after purchase.
- Discuss the principles of cooking organ meats:
  - Organ meats may be tough or tender. Brains, sweetbreads, liver and kidneys from young animals are tender. cook these with dry-heat. Tongue, heart, tripe, oxtails, beef, and pork kidneys, and beef liver are less tender,

and may require moist heat. Liver and kidneys are often chopped or ground for tenderization.

- Organ meats should be cooked until well-done to assure a tasty, safe food.

- Large blood vessels, excess fatty tissue, and strong membranes should be removed in cleaning organ meats.

. Demonstrate the cleaning of two or more variety meats.

. Have aides work in groups to prepare several organ meats. Serve the prepared meats. Discuss the use of organ meats in family meals and snacks.

. Provide aides with simple recipes for cooking other organ meats.

APPLICATION OF LESSON BY AIDES

Aides find out which organ meats homemakers use and how they use them.

Aides use more organ meats and encourage homemakers to try them.

In areas where families produce meat for home use, have aides survey homemakers to see which organ meats are used.

Aides teach homemakers ways to prepare organ meats.

REFERENCES FOR TRAINER AGENT

1. Food For Us All, Yearbook of Agriculture, 1969, pp. 114-116.
2. Beef and Veal in Family Meals, G-118, USDA.
3. Pork in Family Meals, G-160, USDA.
4. Foods, Vail, Griswold, Justin, Rust, pp. 241-243.
5. Lessons on Meat, National Live Stock and Meat Board.

VISUALS AND EQUIPMENT

Pictures of variety meats.

Supplies and equipment for meat preparation.

Fresh or frozen variety meats for preparation.

Comparison Cards; Liver, Bacon, Pork Chop, Meat Patty, National Dairy Council.

Nutrition Charts, National Live Stock and Meat Board.

REFERENCES FOR AIDES

1. Beef and Veal in Family Meals, G-118, USDA.
2. Pork in Family Meals, G-160, USDA.
3. Recipe handouts, prepared locally.

FOOD PREPARATION

Lesson 6: POULTRY

PURPOSE

Trainer agent to help aides:

1. Learn more about the nutritive value of poultry.
2. Recognize the economy and convenience in using poultry.
3. Apply basic principles of cooking poultry.

PRESENTATION

- Discuss why "chicken on Sunday" and "turkey on Thanksgiving" days are past. Have aides name other kinds of poultry.
- Using charts and Comparison Cards review the nutritive contributions of poultry to the diet. See Lesson 7, "Buying Poultry," Food Buying, Supplemental Lessons for Training Extension Aides. Points for emphasis include:
  - High quality protein in poultry.
  - Young poultry is lower in fat and calories than older ones and most other meats. Much of the fat is in and under the skin and around the giblets.
  - Vitamin and mineral content is similar to that of red meat.
  - Light poultry meat is lower in fat, iron, thiamine, and riboflavin but higher in niacin than dark meat.
- Display and discuss the uses of some poultry products available locally, such as canned chicken, frozen chicken pies.
- Discuss the principles of cooking poultry:
  - Flavor develops during proper cooking of poultry.
  - Freshly killed chickens should be held at cool temperatures for about four hours before cooking to prevent toughness; about twelve hours for turkeys.

- High temperature for long periods of time toughens the protein and causes shrinkage and loss of juice.

- Small pieces of poultry cook quicker than large pieces; young birds cook in less time than older ones.

- Young birds may be cooked in a variety of ways - either by dry or moist heat; older birds are best cooked by moist heat.

- All poultry should be completely cooked at one cooking time.

. Stress principles of cooking poultry in demonstrations of two or more methods.

- Frying. Describe deep, shallow, and oven frying. Demonstrate oven frying.

  -- Demonstrate the cutting of a whole chicken in pieces.

  -- Show how to prepare pieces for frying (dry, coat with flour or cereal mixture, or dip in oil or melted fat).

  -- Emphasize correct cooking temperature and the need not to overcrowd the pan.

  -- Stress the importance of the lack of absorption of fat during the cooking process.

- Roasting (dry-heat method). Demonstrate preparation of fowl for roasting - wash, drain, dry, salt and stuff. Show how to secure legs and wings and position in the pan.

  -- Show how to protect fowl from overbrowning.

  -- Discuss advantages of roasting fowl in brown paper bags (or brown-n-serve bags); point out disadvantages.

  -- Demonstrate type of pan needed -- shallow, inexpensive or improvised.

-- Demonstrate tests for doneness. If practical, show how to insert and read a meat thermometer.

-- Discuss recommended procedures for thawing frozen poultry.

-- Discuss safe storage of leftover poultry and stuffing.

-- Demonstrate cleaning and cooking giblets and neck (dry or moist heat method).

- Broiling (dry-heat), indoor or outdoor. Show cutting and positioning of meat, basting, turning, and tests for doneness.

- Braising (moist-heat). Stress need for a closely covered pan. Point out use to make meat tender and shorten cooking time.

- Simmering or stewing. Mention that a "hen," "stewing chicken," or young chicken may be used. Point out that cooking time will be less for young poultry and the broth may not be as rich and flavorful. Suggest the amount of water to use, and common spices or herbs for added flavor. Discuss ways to use the cooking liquid. Show how to remove hardened fat from chilled liquid. Suggest ways to use the fat.

. Arrange cooked poultry for attractive serving.

. Discuss ways to use left-over poultry.

. Make a gravy using fat drippings.

APPLICATION OF LESSON BY AIDES

Prepare poultry in new ways for own family.

Make plans to use information with homemakers. At a later meeting, share new ideas for use of poultry.

REFERENCES FOR TRAINER AGENT

1. Food For Us All, Yearbook of Agriculture, 1969, USDA, pp. 117-125.
2. Foods, Vail, Griswold, Justin, Rust, 1967, pp. 247-257.
3. Handbook of Food Preparation, AHEA, pp. 75-79.
4. Poultry Meal Planner, Swift and Company.
5. Homemaker's Turkey Handbook, National Turkey Federation.

VISUALS AND EQUIPMENT

Food and supplies for preparation.

Equipment for cooking and serving food.

Comparison Cards , National Dairy Council.

"Hooray for Chicken," filmstrip, National Broiler Council.

"Chicken American Style," movie, National Broiler Council.

REFERENCES FOR TRAINER AIDES

1. Poultry in Family Meals, G-110, USDA.
2. Full of Flavor Chicken, S-1, Poultry and Egg National Board.
3. Family Fare, G-1, USDA.
4. Money-Saving Main Dishes, G-43, USDA.
5. Poultry - a good choice for the thrifty family, FNS-27. Aves, FNS-46.

FOOD PREPARATION

Lesson 7: FISH

PURPOSE

Trainer agent to help aides:

1. Learn more about the nutritive value of fish.

2. Recognize the economy and convenience in using fish.

3. Apply basic principles of fish cookery.

PRESENTATION

. Introduce the lesson with a display of fish available locally. Include fresh, canned, and frozen fish.

. Discuss the advantages of the use of each form. (Canned fish is thoroughly cooked and may be eaten as it comes from the can or may be used in recipes.)

  - Convenience forms of frozen fish are also available. Many require only heating before serving.

. Review the nutritive value of fish. See Lesson 8 Food Buying, Supplemental Lessons For Training Extension Aides. Points for emphasis include:

  - All types of fish, including shellfish, are excellent sources of protein.

  - Mineral content of fish is variable. Fish canned with bones is rich in calcium; fish from the sea are an important source of iodine.

  - Fat content of fish varies with the type and the season. Some fish fats contain vitamin D.

. Review the cost of fish as a source of protein. See Lesson 8 Food Buying, Supplemental Lessons For Training Extension Aides.

. Discuss the principles of cooking fish:

  - Fish has little connective tissue so a shorter cooking time is required than for most meat and poultry.

- High heat or long cooking periods cause protein to become tough. Due to the high protein content of fish, moderate temperatures are desirable.

- Fish is adequately cooked when the flavor is developed and the flesh looks white and breaks easily into clumps when tested with a fork.

  -- Cooking fish at high temperatures or cooking too long will cause shrinkage, and make the fish tough, dry and lacking flavor.

- Because fish is tender, it should be handled as little as possible.

- Frozen fish should be thawed in the refrigerator rather than at room temperature. It may be cooked without thawing if additional cooking time is allowed.

. Describe common methods of cooking fish:

  - Fish is usually cooked by dry-heat such as broiling, baking, or frying. These methods are especially good for fish high in fat content.

  - Lean fish may be boiled or steamed and if some fat is added, may also be broiled or baked.

    -- List examples of fish that usually are considered to be low in fat.

. Demonstrate how to clean fresh fish (if practical).

. Stress principles of fish cookery by demonstrating several methods of cooking fish:

  - Frying. Emphasize that to get a crisp, non-greasy crust use good quality frying fat, do not overload frying pan, and use correct temperature.

    -- Demonstrate coating fish pieces for frying; testing fry fat temperature.

    -- Discuss the amount of fat needed.

  - Baking. Demonstrate using a simple sauce or spices in basting fat to give attractive color; show fork testing for doneness. Show how to stuff a whole fish for baking.

- Broiling. Use high temperature for a short time. Stress care in turning large pieces. Small thin pieces are not turned.

- Steaming, simmering, and poaching. Describe these methods for both top-of-the-stove and in-the-oven cooking. Demonstrate the use of a cloth or cooking plastic or foil for handling fish to prevent flaking during steaming.

. Prepare canned or home cooked fish as a casserole, croquette (cake), or salad. Use recipes not familiar to the aides.

. Suggest colorful inexpensive sauces, and vegetables, and fruit to serve with fish. Emphasize that the delicate flavor of fish should not be overpowered by too much seasoning.

. Display pictures of fish served in attractive, inexpensive ways.

APPLICATION OF LESSON BY AIDES

Discuss how this information will be used with homemakers.

Prepare fresh, frozen, and canned fish for own family.

Find out what kinds of fish homemakers are now using and how the fish are prepared.

REFERENCES FOR TRAINER AGENT

1. Food For Us All, Yearbook of Agriculture, 1969, pp. 127-138.

2. Food, Yearbook of Agriculture, 1959, pp. 353-355; 536-538.

3. Foods, Vail, Griswold, Justin, and Rust, 1967, pp. 264-269.

4. Foundations of Food Preparation, Peckman, pp. 276-281.

5. Let's Cook Fish, I49.49-2:8, National Marine Fisheries Service.

6. Handbook of Food Preparation, AHEA, pp. 39-46.

VISUALS AND EQUIPMENT

Frozen fish cartons.

Cans of fish of different varieties, sizes and types of pack.

Comparison Cards: Fish, Meat Patty, Chicken, National Dairy Council.

Fish and supplies needed in food preparation.

REFERENCES FOR AIDES

1. Money-Saving Main Dishes, G-43, USDA.

2. Family Fare, G-1, USDA.

3. Fish for Compliments on a Budget, I49.49-2:19, National Marine Fisheries Service. 15¢.

4. Common Sense Fish Cookery, I49.49-2:13, National Marine Fisheries Service. 60¢.

5. How to Eye and Buy Seafood, 149.49-2:15, National Marine Fisheries Service.

6. Fish - a good choice for the thrifty family, FNS-26.
   Pescada, FNS-53.

FOOD PREPARATION

Lesson 8: EGGS

PURPOSE

Trainer agent to help aides:

1. Learn more about the food value of eggs.
2. Learn more about the grades of eggs sold locally.
3. Plan meals using eggs.
4. Understand and apply the principles involved in cooking eggs.

PRESENTATION

- Review the nutritive value of eggs. See Lesson 9, Food Buying, Supplemental Lessons for Training Extension Aides. Use Comparison Cards as a reference.
- Have aides discuss ways they use eggs in meals and snacks. Use Eggs in Family Meals and other resource material to learn ways to use eggs in cooking. List the ways mentioned.
- Discuss the proper storage of eggs. Consider eggs in the shell, egg yolks, and egg whites.
- Caution aides about the use of cracked or soiled eggs. Point out that such eggs can produce food poisoning.
- Discuss principles of egg cookery:
  - Eggs should be cooked with low to moderate heat, for just the right length of time - never overcooked.
  - Heat coagulates and sets the protein and the egg becomes firm. A properly cooked egg has a tender white and a smooth yolk.
  - If cooking temperature is too high or the egg is cooked too long, the protein shrinks and makes the white tough and the yolk mealy.
  - Explain that the green discoloration that sometimes appears between the white and the yolk of a hard-cooked egg is harmless but unattractive. To help prevent this discoloration, cook eggs at low temperature, avoid overcooking, and cool promptly.

- Emphasize the principles of egg cookery by demonstrating basic methods of cooking eggs:

  - Eggs cooked in shell. Point out that water should be kept below the boiling point.

  - Poached eggs. Show how to break an egg.

  - Fried or fry-poach eggs.

  - Scrambled eggs. Stress importance of slow cooking. Show aides that the cooked eggs are moist and tender.

- Demonstrate common uses of eggs. Aides may work in small groups to use eggs in several ways. Eggs-

  - Blend ingredients in meatloaf, croquettes, and patties.

  - Emulsify as in mayonnaise.

  - Leaven cakes, breads, omelets. Explain that egg white holds air when beaten; the more sugar added to beaten egg white, the longer the cooking time required to reach a thick or firm stage.

  - Thicken puddings and sauces. Point out that a little warm liquid should be added to slightly beaten egg before combining the egg with a hot liquid or mixture.

- Show filmstrip "Egg Basics." Ask aides to decide whether ideas presented are practical for their use.

- Have aides plan meals and snacks using eggs.

- Mention that dried and frozen eggs and egg mix are not available generally to homemakers. They are found in some retail stores and specialty shops.

APPLICATION OF LESSON BY AIDES

Aides encourage homemakers to use eggs in meals in a variety of ways.

Aides teach homemakers correct methods of cooking eggs and show them new ways for using eggs in cooking.

REFERENCES FOR TRAINER AGENT

1. Eggs, Basic Information For Young Homemakers Kit, Poultry and Egg National Board.

2. Food, The Yearbook of Agriculture, 1959, pp. 538-539

3. Food For Us All, The Yearbook of Agriculture, 1969, pp. 139-145.

4. Foods, Vail, Griswold, Justin, and Rust, pp. 191-207.

5. Consumers All, The Yearbook of Agriculture, 1965, pp. 400; 421-425.

6. Handbook of Food Preparation, AHEA, pp. 33-35.

7. Protecting Our Food, The Yearbook of Agriculture, 1966, pp. 133; 174; 184.

8. Egg Mix for Family Meals, FNS Fact sheet, USDA.

VISUALS AND EQUIPMENT

Food and equipment for food preparation.

Comparison Cards: Egg, Milk, Meat Patties, Pork Chop, National Dairy Council.

"Egg Basics," filmstrip, Poultry and Egg National Board.

"How to Buy Eggs," slide set or filmstrip, USDA.

REFERENCES FOR AIDES

1. Family Fare, G-1, USDA.

2. Eggs in Family Meals, G-103, USDA.

3. 13 Easy Ways to Cook Eggs, E-16, Poultry and Egg National Board.

4. Omelets - Puffy, Plain or French, Poultry and Egg National Board.

5. Eggs - a good choice for the thrifty family, FNS-25.

Huevos, FNS-51

FOOD PREPARATION

Lesson 9: NUTS AND PEANUT BUTTER

PURPOSE

Trainer agent to help aides:

1. Learn more about the food value of nuts.

2. Plan meals using nuts as a source of protein.

3. Learn a variety of ways nuts and peanut butter can be used in meals and snacks.

PRESENTATION

- Review the nutritive contribution of nuts. See Lesson 10, Food Buying Supplemental Lessons for Training Extension Aides.

- Emphasize that nuts are rich in protein and niacin, and are important sources of other B Vitamins. Use Comparison Card to illustrate.

  - Estimate the amounts of peanuts and peanut butter needed in substitution for one serving of meat protein.

  - Point out that nuts satisfy the appetite because of their fat content and are good sources of energy.

- Display a variety of nuts in various forms - raw, fat roasted, dry roasted, in the shell, whole and piece kernel, peanut butter varieties.

- Discuss uses of nuts in main dishes, soups, salads, cooked vegetables, breads, relishes, snacks, and desserts.

- Have aides find recipes using peanuts and peanut butter in different ways.

  - Plan meals using some of the recipes.

  - Point out how peanut butter replaces some fat in the recipes.

  - Explain that other nuts may be substituted for peanuts.

. Demonstrate how to:

- Remove shell and skin from nuts.
- Blanch and roast nuts.
- Chop or break nuts in quantity.

. Discuss problems in the use of nuts in cooking:

- Easy burning at high temperatures.
- Darkening, sinking or floating in food mixtures.
- Development of rancid taste.

. Ask aides to work in groups to use nuts or peanut butter in:

- Main dish or cream soup.
- Bread, cookies, or cake.
- Salad.
- Sandwich filling.
- Desserts such as pudding, ice cream, and pies.
- Sauce.

APPLICATION OF LESSON BY AIDES

Aides learn different ways to use nuts.

Aides encourage homemakers to use nuts in meals and snacks.

REFERENCES FOR TRAINER AGENT

1. Food For Us All, Yearbook of Agriculture, 1969, USDA, pp. 196-204.
2. Food, Yearbook of Agriculture, 1959, USDA, pp. 239-243.

VISUALS AND EQUIPMENT

Food and supplies for display and preparation.

Comparison Card, Peanut Butter, et al, National Dairy Council.

Pictures of a variety of nuts.

REFERENCES FOR AIDES

1. Nuts in Family Meals, G-176, USDA.
2. Mr. Peanuts Guide to Nutrition, Standard Brands.
3. Peanut Butter - a good choice for the thrifty family, FNS-27. Mantequilla De Mani (Cacahutates), (Peanut Butter), FNS-52.
4. Nutritive Value of Foods, G-72, USDA.

FOOD PREPARATION

Lesson 10: DRY BEANS, PEAS, AND LENTILS

PURPOSE

Trainer agent to help aides:

1. Learn more about the food value in dry beans, peas, and lentils.
2. Plan meals using dry beans, peas, and lentils.
3. Understand the principles of cooking beans, peas, and lentils.

PRESENTATION

. Arrange a display of dry beans, peas, and lentils, Ask aides to tell how homemakers use these foods.

. Review the nutritive contributions of dry beans, peas, and lentils. Point out that they are in the meat group. Use Comparison Cards to show:

- Contributions of protein, iron, and B-vitamins. Make comparisons with meats. Check some comparisons by cost of protein content. See Lesson 10, Food Buying Supplemental Lessons For Training Extension Aides.
- Source of calories and caloric content.

. Discuss the principles of cooking dry beans, peas, and lentils.

- Dry beans and whole peas should be soaked before cooking to reduce the time required for cooking.
  - -- A quick and effective way to soak beans and whole peas is to boil them for two minutes to soften the skins and then soak them for about an hour before cooking. (Not split peas or lentils).
  - -- Dry beans soaked or cooked in hard water remain tough because the minerals in the water form insoluble salts with substances in the beans. To counteract this add 1/8 teaspoon of soda for each cup of dry beans. Too much soda increases vitamin (thiamine) loss.

- Do not add tomatoes until beans are cooked. The acid keeps the beans from becoming tender.

- Salt and flavorings (onions, herbs) are added after soaking.

- Cook the beans in the water in which they were soaked.

- Cook gently and stir very little to prevent breaking of skins.

- Dry beans absorb moisture and expand during cooking. Allow for expansion space in the cooking kettle.

- Dry beans are done when mealy-tender.

- The cooking liquid should be used as it is rich in nutrients and flavor.

. Demonstrate steps in cooking dry beans:

- Cleaning, sorting, and washing.

- Boiling and putting to soak.

  -- Expansion of beans. Show cooked yield from 1 cup of dry beans.

- Show flavors and seasonings that may be added for variety.

. When practical discuss steps to follow in growing bean sprouts. Discuss their nutritive contributions and use.

. Show pictures of beans in combinations with other foods. Discuss.

. Have aides prepare some dishes using cooked dry beans, peas, and lentils:

- Soups, salads, main dishes, sandwich spreads,

. Plan meals including the prepared dishes.

APPLICATION OF LESSON BY AIDES

Aides talk with homemakers about principles of cooking beans, peas, and lentils.

Aides teach homemakers to use beans, peas, and lentils in a variety of dishes.

REFERENCES FOR TRAINER AGENT

How to Buy Dry Beans, Peas, and Lentils, G-177, USDA.

Family Fare, G-1, USDA.

Money-Saving Main Dishes, G-43, USDA.

VISUALS AND EQUIPMENT

Comparison Cards, National Dairy Council.

Display of beans, peas, and lentils. Include some canned forms.

Food and supplies for food preparation.

REFERENCES FOR AIDES

1. How to Buy Dry Beans, Peas, and Lentils, G-177, USDA.
2. Family Fare, G-1, USDA.
3. Money-Saving Main Dishes, G-43, USDA.
4. Family Meals at Low Cost, PA-472, USDA.
5. Dry Beans - a good choice for the thrifty family, FNS-23.
   Frejoles, FNS-49.
6. Dry Split Peas - a good choice for the thrifty family, FNS-29.
   Guisantes Partidos, FNS-50.
7. Vegetables in Family Meals, G-105.

FOOD PREPARATION

Lesson 11: MILK

PURPOSE

Trainer agent to help aides:

1. Understand more about the need for milk in the diet.

2. Develop a greater appreciation for the use of the less expensive forms of milk.

3. Apply the principles of milk cookery in food preparation.

PRESENTATION

. Review the nutritive contribution of milk to the diet. See Lesson 11, Basic Lessons for Training Extension Aides. Emphasize that:

  - Milk is an excellent source of protein, calcium, riboflavin, and B Vitamins. Whole milk is a good source of Vitamin A.

  - Non-fat dry milk is like whole milk in food value except that fats and fat-soluble vitamins, including Vitamin A, have been removed. Some non-fat dry milk has been fortified with Vitamins A and D.

. Dramatize the saving in money that can be made by using non-fat dry milk in place of whole milk or in combining whole and dry milk.

  - Figure costs of milk, using local prices, for a typical family for one week. Base amount of milk used on the Daily Food Guide recommendations.

. Point out that fluid milk is perishable and should be kept cold until used.

. Discuss the principles of cooking milk and milk products:

  - Treat milk as a high-protein food.

    -- Both the flavor and the odor of milk are affected by prolonged heating and by high temperatures.

    -- Heated milk forms a coating on the bottom of the cooking pan. This coating tends to scorch unless the milk is heated in a double boiler or stirred while heating. Use low to moderate heat.

-- When milk is heated in an uncovered pan, a surface skin is formed. The skin is due to a drying out of fat, minerals and protein on the surface. The skin holds steam in, causing the milk to foam and boil over. Prevent skin formation by using a lid or by stirring the milk.

-- Acids--such as tomatoes or lemon juice--often cause hot milk to curdle. To prevent this in tomato soup, thicken the milk first with flour or starch and add tomato juice shortly before serving, or make a thickened tomato sauce and add it to hot milk just before serving. Peas, carrots, and stringbeans sometimes cause milk products to curdle. Clots caused by fresh fruit or juice are very soft and easily stirred apart.

-- Milk mixtures thickened with flour or starch need constant stirring during cooking to prevent lumping.

-- Evaporated milk may be diluted with an equal volume of water and used like fresh milk for cooking and baking. Full strength evaporated milk adds extra nutritive value. Sweetened condensed milk is used in desserts, candies, and special recipes as it comes from the can.

-- Buttermilk and home-soured milk can be used interchangeably for baking. If a recipe calls for sour milk or buttermilk, prepare the amount needed from sweet milk, or fluid milk made from dry milk. For each cup, combine 1 tablespoon vinegar or lemon juice with enough sweet milk to make 1 cup of liquid. Let this stand 5 minutes before use. Point out that pasteurized milk does not become sour; it becomes putrid.

-- As a substitute for 1 cup of whole milk, use 1 cup of fluid milk made from non-fat dry milk and 2 teaspoons margarine.

-- In some recipes dry milk may be added with the other dry ingredients. Added accuracy in measurement of dry milk solids is important.

-- Chilled non-fat dry milk and undiluted evaporated milk can be whipped. For quick whipping, chill milk until ice crystals form around edges of container then beat quickly.

- Have an aide demonstrate ways to mix non-fat dry milk.

- Demonstrate the principles of cooking milk and milk products by preparing several foods. Aides may work in small groups to help in the preparation.

  - Milk soup.
  - Frozen dessert or whipped topping.
  - Pudding or custard.
  - Beverages.
  - Main dishes.
  - Gravy.

- Show how to:

  - Improvise a double-broiler.
  - Improvise a tight-fitting lid.
  - Whip evaporated milk or reconstituted powdered milk. Show how a fork may be used for whipping.
  - Stir to prevent scorching and lumping.

- As lesson summary, show slides (or filmstrips) "Milk Basic to Good Nutrition," "Milk The Magnificent," or "Food Value Stretchers."

APPLICATION OF LESSON BY AIDES

Aides encourage homemakers to use reconstituted dry milk for drinking and cooking.

Aides teach homemakers to prepare foods containing milk.

REFERENCES FOR TRAINER AGENT

1. Food, The Yearbook of Agriculture, 1959, pp. 112-118.
2. Consumers All, The Yearbook of Agriculture, 1965, pp. 437-440.
3. Food For Us All, The Yearbook of Agriculture, 1969, pp. 146-159.
4. Foods, Vail, Griswold, Justin, and Rust, pp. 174-175.
5. Fact sheets and booklets, National Dairy Council.

VISUALS AND EQUIPMENT

Food and equipment for food preparation

Comparison Cards: Whole Milk, Buttermilk or Skim Milk, Chocolate Milk, Milk Shake, National Dairy Council.

Slides or filmstrips, "Food Value Stretchers, Recipes Using Evaporated Milk and Other Donated Foods," C-152; "Recipes Using Non-Instant, Non-fat Dry Milk," C-169.

REFERENCES FOR AIDES

1. Milk in Family Meals, G-127, USDA.

2. Family Fare, G-1, USDA.

3. Fact Sheets, National Dairy Council.

4. Evaporated Milk - a good choice for the thrifty family, FNS-15.
   Leche Evaporada, FNS-39.

5. Instant Non-fat Dry Milk - a good choice for the thrifty family, FNS-16.
   Leche Instante En Polvo Sin Grasa, FNS-40.

Lesson 12: CHEESE

PURPOSE

Trainer agent to help aides:

1. Learn about the nutritive value of cheese.

2. Understand the principles of cooking with cheese.

PRESENTATION

. Review the nutritive value of cheese. See Lesson 4, Food Buying, Supplemental Lessons For Training Extension Aides.

- Remind the aides that one pound of hard cheese is equal to a gallon of milk and four ounces of cheese is equivalent to a quart of milk. One pound of cottage cheese contains most of the protein found in nearly 3 quarts of milk.

- Compare the fat, calcium, riboflavin, and protein content of cream cheese, cottage cheese, cheddar cheese, and milk. Relate comparisons to cost per ounce and equivalent measures of cheeses to the protein in 8 fluid ounces of milk.

. Discuss the principles of cheese cookery:

- Cheese used should be suitable to the dish being prepared.

  -- Aged or "sharp" natural cheese has a more pronounced flavor than pasteurized processed or blended cheese and less is required in cooking.

  -- Soft, aged natural cheese melts readily and smoothly at low temperature or when broiled.

  -- Cottage cheese combines easily with other foods to make hot or cold dishes.

- High temperatures and long cooking periods make cheese tough and stringy, and cause the fat to separate out.

- Successful cheese cookery depends on cooking cheese at low temperature or heating cheese at high temperature for only a few minutes as in broiling or toasting.

- Cheese blends more readily when it has:

  -- Been chopped or shredded.

  -- Been commercially pasteurized and processed.

- To prevent cheese toppings from toughening during baking, cover them with crumbs or add the cheese before removing the food from the oven.

- Cheese has less tendency to stringiness and separation when combined with white sauce, or starchy foods such as rice, grits, or potatoes.

- Hot cheese dishes should be served immediately.

. Emphasize several principles of cheese cookery in a demonstration of the preparation of cheese fondue - choice of cheese, cooking temperature, cutting of cheese, length of heating time, and when to serve.

. Emphasize other principles of cheese cookery by having aides use several kinds of cheese in cooked foods.

- Toasted or broiled sandwiches.

- Main dish such as a casserole.

- Sauces.

- Cheese breads.

- Desserts.

- Cheese sandwich spread.

- Dish prepared with cottage cheese.

. If practical demonstrate the steps in making cottage cheese.

. Arrange a tray of cheese and fruit for snacks and dessert. Or make a cheese dip.

. Explain the suitability of various cheeses to particular uses.

APPLICATION OF LESSON BY AIDES

Aides prepare cheese in different ways.

Aides teach homemakers to use cheese in family meals and snacks.

REFERENCES FOR TRAINER AGENT

1. Food, The Yearbook of Agriculture, 1959, USDA.
2. Food For Us All, The Yearbook of Agriculture, 1969, USDA.
3. Cheese in Family Meals, G-112, USDA.

VISUALS AND EQUIPMENT

Examples of kinds of cheeses available locally.

Pictures illustrating ways of serving cheese.

Equipment and food for food preparation.

Daily Food Guide, FNS-13.

Comparison Cards: Cheddar; Cottage Cheese, Creamed; Cottage Cheese, Uncreamed; Milk.

REFERENCES FOR AIDES

1. Cheese in Family Meals, G-112, USDA.
2. Family Fare, G-1, USDA.
3. Money-Saving Main Dishes, G-43, USDA.
4. Information sheets, National Dairy Council.
5. Cheese - a good choice for the thrifty family, FNS-14.

FOOD PREPARATION

Lesson 13: SALADS AND RAW FRUITS AND VEGETABLES

PURPOSE

Trainer agent to help aides:

1. Understand the contribution of raw fruits and vegetables to the diet.
2. Learn to use more raw fruits and vegetables.
3. Understand the principles of raw fruit and vegetable preparation.

PRESENTATION

. Discuss the contribution of raw fruits and vegetables to the diet. Use Comparison Cards and other references.

- Roughage (fiber) giving texture and firmness to food.
- Water content aids digestion.
- Color adds beauty and variety to meals.
- Flavors add freshness and variety to meals.
- Nutritive contributions - Vitamins A and C, iron, calcium, and many other nutrients.

. Discuss the ways raw fruits and vegetables are used. Illustrate with pictures.

- Snacks (fruits and vegetables).
- Desserts for family meals, special company meals, picnic meals and meals served in hot weather (fruits).
- Breakfast foods (fruits including citrus fruits, tomatoes, and melons).
- Salad and relish plates (sliced tomatoes, onions, peppers, melon, carrots, radishes).

- Toppings for ice cream, puddings, and cake.

. Discuss some principles of fresh fruit preparation. Demonstrate when practical. Point out that measures to protect Vitamin C usually protect other nutrients.

  - Handle fruit as little as possible to prevent bruising and vitamin loss. Mention that tomatoes and citrus fruits retain Vitamin C very well.

  - Wash all fruit well in water that is safe for drinking.

  - Plan fresh fruit combinations that are harmonious in appearance, flavor, and texture.

  - Serve unpeeled when practical to decrease vitamin loss.

  - Large pieces of sliced or chopped fruit lose less vitamin content than small pieces and usually look more attractive.

  - Darkening of cut edges can be prevented or reduced by quick freezing, covering with sugar or sugar syrup, or by dipping in acid juice (lemon, apple, orange, vinegar) or salt water.

  - A garnish of another fruit, nuts, or edible leafy greens adds color and taste appeal.

  - Chill or keep cool to retain freshness and vitamins.

  - Some fruit peels and bruised fruits may be simmered to make fruit juices for use in beverages, dessert sauces, and jelly.

. Discuss principles of fresh vegetable preparation. Demonstrate when practical.

  - Handle leafy and soft vegetables as little as possible.

  - Remove bruised, wilted, and tough parts. Trim sparingly to avoid loss of food and nutrients. Some trimmings, bruised and wilted parts may be used in soups, stews, gravies, and beverages.

  - Wash vegetables thoroughly. Add salt to warm water when washing dark green leafy vegetables to remove insects. Lift leaves from water to let sand and grit settle.

- Break, slice or cut into serving-size pieces immediately before eating to avoid vitamin and water loss.

- Dry leaves before using in salads.

- Serve plain, in combinations, or with light seasoning, dressings, or sauce that does not overpower natural flavors.

- Add salt or dressings immediately before eating to prevent "weeping", "soggy" appearance.

- Refresh wilted vegetables by keeping them in plastic bags in the refrigerator or in cold water. Vegetables lose small amounts of nutrients when left in cold water.

. Demonstrate the making of one or more simple salad dressing. Show how to "break" salad greens, "toss" a simple salad and lightly coat greens with dressing. Show how to cut vegetables in strips for snack "dippers."

. Ask aides to work in groups to make simple inexpensive fruit and vegetable garnishes. Encourage them to be creative. Provide pictures showing practical suggestions. Discuss results.

. Prepare and taste some raw fruits and vegetables.

. Discuss the possibility of growing vegetables at home.

APPLICATION OF LESSON BY AIDES

Aides use more raw fruits and vegetables.

Aides teach homemakers new ways to fix raw fruits and vegetables.

Aides show homemakers how to make interesting salads.

Aides encourage homemakers to grow vegetables in small plots or in mini-and tub-gardens.

REFERENCES FOR TRAINER AGENT

1. Food, Yearbook of Agriculture, 1959, pp. 547-549.

2. Food For Us All, Yearbook of Agriculture, 1969, 174-194.

3. Conserving the Nutritive Values in Foods, G-90, USDA.

4. Foods, Vail, Griswold, Justin, and Rust, pp. 56-59, 141-155.

5. "All About Garnishes," EKCO

6. Salads and Dressings Educational Kit, Kraft Foods.

VISUALS AND EQUIPMENT

Comparison Cards: Carrots, Coleslaw, Tomato, Grapefruit, Orange Juice, Banana, Apple, et al, National Dairy Council.

Posters and pictures: Kraft Foods, Sunkist Growers, Florida Citrus Commission, United Fresh Fruit and Vegetable Association, Del Monte Kitchens, Green Giant Company, and Stokeley-Van Camp, Inc.

Food and equipment for food preparation.

REFERENCES FOR AIDES

1. Fruits in Family Meals, G-125, USDA.

2. Vegetables in Family Meals, G-105, USDA.

3. Vegetable Treasures Kit, Fact sheet, Green Giant Company.

4. Salads and Dressings Educational Kits, Fact sheet, Kraft Foods.

5. Fruits and Vegetables, PA-749, USDA.

6. A Variety of Fruits and Vegetables, a good choice for thrifty families, FNS-20, USDA.
Una Variedad De Frutas Y De Vegetables, FNS-45, USDA.

FOOD PREPARATION

Lesson 14: COOKED VEGETABLES - EMPHASIS ON VITAMIN A VALUE

PURPOSE

Trainer agent to help aides:

1. Learn more about the nutritive value of different vegetables, emphasizing good sources of Vitamin A.

2. Understand principles of vegetable cookery.

3. Learn various ways of improving meals through the use of cooked vegetables.

PRESENTATION

- Ask aides to list the vegetables most frequently prepared in homemakers' homes. List ways the vegetables are prepared.

- Review major points in the selection of fresh, frozen, and canned vegetables with emphasis on vegetables that are good sources of Vitamin A. See Lesson 10, Food Buying Supplemental Lessons For Training Extension Aides.

- Point out that Vitamin A is not lost in usual processing methods.

- Discuss desirability of growing vegetables in small plots and large containers.

- Mention wild greens as a source of Vitamin A value and other nutrients.

- Review nutritive value of vegetables:

  - Vegetables make an important contribution to the diet by supplying vitamins, minerals, proteins, starches, sugars, and fiber (cellulose). Emphasize vegetables rich in Vitamin A.

  - Point out that nutrient content of vegetables may be indicated by:

    -- The part of the plant used.

    -- The color or degree of color of the vegetable.

    -- The freshness of the vegetable.

Discuss the general principles of cooking vegetables. Emphasize vegetables that are good sources of Vitamin A. Point out that Vitamin A value is almost completely retained in vegetables cooked by a variety of methods (because the precursors of Vitamin A, carotenoids, are insoluble in water and resistant to oxidation except when vegetables are dried).

- A cooked vegetable should be tender, firm, have characteristic color and pleasing flavor, and retain high nutritive value.

    -- Prepare vegetables just before cooking. Prepare only enough for immediate needs.

    -- Wash vegetables quickly. Soaking some vegetables in warm or salty water removes dirt or insects; cold water helps revive wilted vegetables. Avoid soaking cut or peeled vegetables as some nutrients are lost.

    -- Tough stalk or bruised root portions may be peeled and then cooked (broccoli, asparagus, sweet potatoes).

    -- Sugar, some vitamins, and minerals dissolve in water. Cook in as little water as possible and use all water in which vegetables were cooked or canned. Less liquid is needed when a tight fitting lid is used and when cooking temperature is not too high.

    -- Nutrient losses are increased by overcooking.

    -- Cooking without a lid, and addition of alkaline (baking soda) increase losses of some nutrients.

. Mention color changes in vegetables due to the type of water used (acid or alkali).

. Discuss the basic principles of cooking:

- Strong-flavored vegetables (yellow onions). Cooking in an uncovered sauce pan for a few minutes allows steam to carry off strong flavors.

- Green vegetables (leafy vegetables). Green color is best preserved by keeping the cooking period short. Use small to moderate amounts of boiling water in a pan with a tight-fitting lid.

- Yellow vegetables (carrots). Darkening is probably the result of the scorching of sugar present in the vegetable. Short cooking periods are recommended.

- Canned vegetables. Commercially canned vegetables are cooked in the can and require no further cooking. The liquid should be drained into a pan and heated until reduced one-half or more before adding the vegetable. Or the liquid may be used in soup, gravy, or stews.

- Frozen vegetables. Cooking times are much shorter for frozen vegetables than for fresh ones. They may be cooked from the frozen state.

. Discuss ways of cooking Vitamin A-rich vegetables. Use pictures to illustrate.

- Bake.

- Simmer.

- Broil.

- Pan fry.

- Panning.

. Discuss methods of serving vegetables. Use pictures to illustrate.

- Scalloping.

- Au Gratin.

- Custards.

- Glazing.

- Stuffed.

- Cream soups.

- Combinations with meats or other vegetables.

- Discuss preparation time of vegetables in relation to time for serving.

. Decide how to determine the amount to cook.

- Show phono-viewer program "Fruits and Vegetables."

- Ask aides to work in pairs to prepare one or more Vitamin A-rich vegetable. Serve and taste vegetables.

APPLICATION OF LESSON BY AIDES

Aides use new vegetables or new ways of preparing familiar vegetables.

Aides find new ways to use vegetables.

Aides find out how homemakers use vegetables and teach homemakers new ways to prepare vegetables.

Aides learn to recognize wild greens and encourage homemakers to use them where practical.

REFERENCES FOR TRAINER AGENT

1. Food, Yearbook of Agriculture, 1959, pp. 539-547.
2. Consumers All, Yearbook of Agriculture, 1965, pp. 454-456.
3. Food For Us All, Yearbook of Agriculture, 1969, pp. 174-194.
4. Handbook of Food Preparation, AHEA, pp. 84-103.
5. Conserving the Nutritive Value in Foods, G-90, USDA.
6. Foods, Vail, Griswold, Justin, Rust, pp. 107-139.
7. Vegetable Cook Book, Green Giant, Pillsbury Company.

VISUALS AND EQUIPMENT

Phono-viewer program "Fruits and Vegetables."

Posters and pictures: National Canners Association, United Fresh Fruits and Vegetable Association, Del Monte Kitchens, Kraft Foods, Green Giant Company, Stokely-Van Camp, Inc.

Food and equipment for food preparation.

Comparison Cards: Sweet Potato, Green Salad, Carrots, Greens, et al,, National Dairy Council.

REFERENCES FOR AIDES

1. Vegetables in Family Meals, G-105, USDA.

2. Family Fare, G-1, USDA.

3. A Variety of Fruits and Vegetables - Some Good Choices for the Thrifty Family, FNS-20, USDA.

4. Vegetables - a good choice for the thrifty family, FNS-19, FNS-42.

Lesson 15: COOKED VEGETABLES - EMPHASIS ON VITAMIN C

PURPOSE

Trainer agent to help aides:

1. Learn more about the nutritive value of different vegetables with emphasis on good sources of Vitamin C (ascorbic acid).

2. Understand principles of vegetable cookery to conserve Vitamin C.

3. Learn various ways of improving meals through the use of cooked vegetables.

PRESENTATION

- Review the list of vegetables most frequently prepared in homemakers' homes. See Lesson 14. Check the ones that are good sources of Vitamin C.

- Review major points in the selection of fresh, frozen, and canned vegetables with emphasis on vegetables that are good sources of Vitamin C. See Lesson 10, Food Buying Supplemental Lessons For Training Extension Aides.

- Review nutritive value of vegetables with emphasis on Vitamin C rich vegetables.

  - Vegetables make an important contribution to the diet by supplying vitamins, minerals, proteins, starches, sugars, and fiber (cellulose).

  - Mention that nutrient content of vegetables is indicated by:

    -- The part of the plant used.

    -- The color or degree of color of the vegetable.

    -- The freshness of the vegetable.

. Point out that Vitamin C is easily lost during cooking through:

- Solubility in water.

- Oxidation when exposed to air.

. Review the general principles of cooking vegetables. Stress principles to prevent Vitamin C loss. Point out that measures to protect Vitamin C usually conserve other nutrients.

- A cooked vegetable should be tender, firm, have characteristic color and pleasing flavor, and retain high nutritive value.

  -- Prepare vegetables just before cooking. Prepare only enough for immediate needs.

  -- Wash vegetables quickly. Soaking some vegetables in salty water removes dirt or insects; cold water revives wilted vegetables. Avoid soaking cut or peeled vegetables as some nutrients are lost.

  -- Tough stalk or scarred root portions may be peeled and then cooked to the tender stage (broccoli, asparagus, sweet potatoes).

  -- Sugar, some vitamins, including Vitamin C, and minerals dissolve in water. Cook in as little water as possible. Use all water in which vegetables were cooked or canned. Less liquid is needed when a tight-fitting lid is used and when cooking temperatures are not too high.

  -- Nutrient losses, especially Vitamin C, are increased by extremely high temperatures and prolonged cooking.

  -- Cooking without a lid, overcooking, and addition of alkalines (baking soda) increase Vitamin C and some other nutrient losses.

. Review color changes in vegetables due to the type of water used (acid or alkali). Point out that acid and vinegar do not destroy Vitamin C; alkali does.

. Review the basic principles of cooking:

- Strong-flavored vegetables. Cooking in an uncovered saucepan for a few minutes allows steam to carry off strong flavors.

- Green vegetables. Green color is best preserved by keeping the cooking period short. Use small to moderate amounts of boiling water in a pan with a tight-fitting lid to preserve nutrients.

- Yellow vegetables. Darkening is probably the result of the scorching of sugar present in the vegetable. Short cooking periods are recommended to prevent darkening and to conserve Vitamin C content.

- Canned vegetables. Commercially canned vegetables are cooked in the can and require no further cooking. The liquid contains water-soluble nutrients and should be drained into a pan and heated until reduced one-half or more before adding the vegetable. Or the liquid may be used in soup, gravy, or stews.

- Frozen vegetables. Cooking times are much shorter for frozen vegetables than for fresh ones. They may be cooked from the frozen state.

. Discuss ways of cooking Vitamin C-rich vegetables. Use pictures to illustrate.

- Bake.

- Simmer.

- Broil.

- Pan fry.

- Panning.

. Discuss methods of serving vegetables. Use pictures to illustrate.

- Scalloping.

- Custards.

- Glazing.

- Stuffed.

- Cream soups.

- Combinations with meats or other vegetables.

- Discuss preparation time of vegetables in relation to time for serving.

- Decide how to determine the amount to cook.
- Show phono-viewer program "Fruits and Vegetables."
- Ask aides to work in pairs to prepare and serve one or more Vitamin C-rich vegetable.
- Serve and taste vegetables.

APPLICATION OF LESSON BY AIDES

Aides use new ways of preparing familiar vegetables.

Aides find out how homemakers use vegetables and teach homemakers new ways to prepare vegetables.

Aides encourage homemakers to find new ways to use vegetables.

REFERENCES FOR TRAINER AGENT

1. Food, Yearbook of Agriculture, 1959, pp. 539-547.
2. Consumers All, Yearbook of Agriculture, 1965, pp 454-456.
3. Food For Us All, Yearbook of Agriculture, 1969, pp. 174-194.
4. Handbook of Food Preparation, AHEA, pp. 84-103.
5. Conserving the Nutritive Value in Foods, G-90, USDA.
6. Foods, Vail, Griswold, Justin, Rust, pp. 107-139.
7. Vegetable Cook Book, Green Giant, Pillsbury Company.
8. Conserving the Nutritive Values in Foods, G-90, USDA.

VISUALS AND EQUIPMENT

Phono-viewer program "Fruits and Vegetables," USDA.

Posters and pictures: National Canners Association, Green Giant Company, United Fresh Fruits and Vegetable Association, Kraft Foods, and Stokely-Van Camp, Inc.

Food and equipment for food preparation.

Comparison Cards: Tomato, Greens, Green Salad, Coleslaw, Sweet Potato, et al., National Dairy Council.

REFERENCES FOR AIDES

1. Vegetables in Family Meals, G-105, USDA.

2. Family Fare, G-1, USDA.

3. A Variety of Fruits and Vegetables - Some Good Choices for the Thrifty Family, FNS-20.

4. Vegetables - a good choice for the thrifty family, FNS-19; FNS-42. Fruitas Y Vegetables Ricos en Vitamina "C," FNS-43.

FOOD PREPARATION

Lesson 16: COOKED FRUIT

PURPOSE

Trainer agent to help aides:

1. Learn more about the nutritive value of fruit.
2. Learn ways to include fruit in the diet.
3. Learn the principles of cooking fruit.

PRESENTATION

- Have aides list fruits commonly used by homemakers.
- Review the nutritive value of fruit. Use Comparison Cards and Nutritive Value of Foods as references.
- Review points to consider when selecting fruits. See Lesson 11, Food Buying, Supplemental Lessons For Training Extension Aides.
- Display some commercially and home-prepared fruits. Include examples of fresh, frozen, canned and dried fruit. Discuss each form as to nutritive value, ease of preparation, and use.
- Discuss principles of cooking fruit. Point out that canned fruits are cooked fruit.
  - Some food value is lost when fruits are cooked. Cooking is necessary to soften the fiber and cook the starch in some fruits. Some fruits are cooked for variety, or to keep them from spoiling.
  - Fresh fruits must be thoroughly washed to remove dust, spray, and insects.
  - The method of cooking fruit is determined by kind or variety of fruit and degree of ripeness.
  - To help prevent fruits from turning dark dip in salt water, lemon juice, vinegar, or ascorbic acid.
  - Cook fruit slowly in a sugar syrup to retain shape; and in water when a softer product is desired. Some hard fruits toughen when cooked in sugar (pear, quince). Sugar may be added after fruit is cooked.

- Frozen fruit should be thawed in the unopened package. Since freezing softens fiber, frozen fruits should be heated only or added late in the cooking process.

- The amount of water used to cook fruit depends on size and water content (berries vs. peaches).

- Moist heat softens fruit; dry heat tends to toughen and brown fruits because of the sugar in the fruit.

- Dried fruit may be cooked without soaking. Some dried fruits may be soaked for several hours and eaten without cooking. Fruit should be cooked in the water used for soaking.

. Have aides prepare fruit in a variety of ways:

- As a beverage, dessert, salad, meat accompaniment, and snack.

- By stewing, baking, broiling, and frying.

- Plain, and in custard or sauce

- Unpeeled and peeled.

- As a soft food and as a firm food.

Use some canned, fresh, and dried fruits in preparation.

APPLICATION OF LESSON BY AIDES

Aides find pictures of cooked fruits to use with homemakers.

Aides use pictures and demonstrations to show homemakers ways to use fruits and fruit juices.

REFERENCES FOR TRAINER AGENT

1. Food For Us All, The Yearbook of Agriculture, 1969, pp. 167-173.

2. Food, The Yearbook of Agriculture, 1959, pp. 547-548.

3. Conserving the Nutritive Values in Foods, G-90, USDA.

4. Nutritive Values in Food, G-72, USDA.

5. Foods, Vail, Griswold, Justin, and Rust, pp. 140-146.

6. Handbook of Food Preparation, AHEA, pp. 47-57.

VISUALS AND EQUIPMENT

Display of plentiful fruit including fresh, frozen, canned, and dried fruit.

Commercial posters on nutritive value of fruit.

Comparison Cards: Apple, Apple Pie, Banana, Orange Juice, National Dairy Council.

Food and supplies for preparation.

REFERENCES FOR AIDES

1. Fruits in Family Meals, G-125, USDA.

2. Apples in Appealing Ways, G-161, USDA.

3. Family Fare, G-1, USDA.

4. Fruits - a good choice for the thrifty family, FNS-18.

5. Raisins - a good choice for the thrifty family, FNS-21.

FOOD PREPARATION

Lesson 17: CEREAL AND PASTA

PURPOSE

Trainer agent to help aides:

1. Review the nutritive value of cereal and pasta.
2. Learn a variety of ways to use cereals in cooking.
3. Learn the principles of cooking cereal and pasta.

PRESENTATION

- Review the nutritive contribution of cereals. See Lesson 13, Food Buying, Supplemental Lessons For Training Extension Aides.
- Display some packaged cereals. Help aides identify those that are:
  - Uncooked cereals such as regular oats.
  - Partially cooked cereals such as quick-cooking oats.
  - Ready-to-eat cereals and instant cereals.
- Discuss the principles of cooking cereals.
  - The essential action in cooking cereals is the gelatinization of the cereal starch. Starch does not dissolve in water. It absorbs water. In cooking cereal and pasta, it is important to use the proportions of ingredients and the cooking times recommended on the package.
  - Starch mixed insufficiently with cold liquid or added directly to hot liquid frequently lumps. The outside of the lump is moist; the inside is dry. Lumping decreases thickening power.
  - Fine cereal tends to lump unless (a) mixed with a little cold water before being added to liquid or (b) sprinkled slowly into rapidly boiling water.

- The heat of cooking forms steam which passes through the outer coat of the cereal granule. The steam bursts the cell wall permitting release of the starch. Then the cereal gels (thickens) as it cooks.

- Cereals continue to thicken as they cool.

- Cereals vary in the amount of water and cooking time required for gel formation. The goal of breakfast cereal cookery is to form a lump-free thickened mixture with a pleasant flavor and no overcooked "stickiness."

- Stirring prevents lumping and sticking. Beating can break apart swollen lumps. Over-stirring causes starch in cereal to become sticky.

- Undercooked cereals lack flavor and do not form soft gels. Reduce heat, cover, and continue cooking for length of time given on the cereal package.

- Rice grains swell and become tender without breaking. The goal in cooking rice is to achieve tender, dry, fluffy grains that stand apart.

    -- Packaged rice is clean. To keep nutrients in cooked rice do not wash rice before or after cooking it. To cook rice boil, steam, oven-cook, or fry.

- The water in which cereal is cooked should be absorbed during the cooking time because the water contains soluble nutrients, especially thiamine.

. Demonstrate the principles of starch cookery by cooking one breakfast cereal and one pasta.

. Have aides prepare cereals and pasta in several ways.

- Cereal cooked in milk. Use dry milk in powder or fluid form.

- Cereal cooked with fruit - fresh, canned, or dried - baked or boiled.

- Cereal main dishes.

- Cereal used as coating for meat.

- Cereal in desserts, cookies, candies.

- Cereal snack mix.
- Macaroni or noodles in salads or main dishes.
- Crisp fried cornmeal mush.
- Spoon bread.

. Discuss ways to use or restore left-over cooked cereals.

- Proper reheating.
- Use in food preparation.

. Discuss ways to add flavor and attractiveness to cereal dishes.

APPLICATION OF LESSON BY AIDES

Aides use cereals in a variety of ways and report acceptance by family members.

Aides teach homemakers about new cereals and new ways to use familiar cereals.

REFERENCES FOR TRAINER AGENT

1. Food For Us All, Yearbook of Agriculture, 1969, pp. 205-212.
2. Creative Cookery, Kellogg's.
3. Cereal Cookbook, Cereal Institute.
4. Food, Vail, Griswold, Justin, and Rust, pp. 305-306, pp. 81-82.

VISUALS AND EQUIPMENT

Equipment and supplies for use in food preparation.

Comparison Cards: Cooked Cereal, Macaroni, National Dairy Council.

Pictures of cooked food dishes using cereal and pasta.

REFERENCES FOR AIDES

1. Cereal and Pasta in Family Meals, G-150, USDA.
2. Budget Saving Recipes, The Quaker Oats Company.

3. Arroz Enriquecido (Enriched Rice), FNS-54.

4. Avena En Hojuelas (Rolled Oats), FNS-55.

5. Harina De Maiz Enriquecida (Enriched Corn Flour), FNS-57.

6. Maccarones (Macaroni), FNS-58.

7. Moyuelo -- Corn Grits Integros O' Enriquecidos (Enriched Corn Grits, FNS-59.

8. Panes Y Cereales Integros O' Enriquecidos (Enriched Cereals and Breads), FNS-60.

9. Trigo En Hojuelas Donada (Donated Rolled Wheat), FNS-61.

10. Enriched Corn Grits, a good choice for the thrifty family, FNS-32.

11. Enriched Corn Meal, a good choice for the thrifty family, FNS-33.

12. Enriched Macaroni, a good choice for the thrifty family, FNS-34.

13. Enriched Rice - a good choice for the thrifty family, FNS-35.

14. Rolled Oats - a good choice for the thrifty family, FNS-36.

15. Rolled Wheat - a good choice for the thrifty family, FNS-37.

Lesson 18: QUICK BREADS

PURPOSE

Trainer agent to help aides:

1. Learn to prepare quick breads using little equipment.
2. Become acquainted with homemade and commercial mixes.
3. Understand the principles of quick bread preparation.

PRESENTATION

. Discuss problems encountered in teaching homemakers to make bread.

- Lack of baking pans for oven or top of stove.
- Ovens do not heat or do not have temperature controls.
- Some homemakers have been unsuccessful in making good quality breads.

. Display improvised bread-making equipment (rolling pin, measuring cups, and spoons, heavy cloth to roll dough on, pans for baking in oven and on top of the stove).

. List examples of quick breads.

. Discuss the principles of quick bread preparation. Consider drop batter, pour batter, and doughs.

- Dry ingredients for quick breads should be mixed quickly with liquid and mixed only enough to combine.
  - -- Overstirring toughens the product and results in a coarse texture. (Show example.)
  - -- Understirring gives a heavy compact product. (Show example.)
- Ingredients should be added in the correct proportion to give the product the desired lightness, body, shape, and flavor.

-- Flour makes the framework.

-- Liquids in contact with leavening agents (baking powder and soda) produce a gas, carbon dioxide, which expands on heating. Too much liquid weakens the structure and gives a "flat" product.

-- Leavening agents increase volume and lighten the product.

-- Fat makes the product tender by separating the flour particles.

-- Eggs strenthen the framework and add volume, flavor, color, and nutrition.

-- Sugar sweetens the product and tenderizes the framework.

. Discuss the advantages in using a mix —either home-prepared or commerical. Point out disadvantages.

. Have aides demonstrate how to make and use a mix. Show how to store the mix.

. Prepare quick breads to demonstrate:

- Special techniques as stirring, beating, kneading, creaming, cutting-in, folding-in, rolling, filling pans, and testing for doneness.

- Variations in major ingredients and substitutions such as honey for sugar, liquid shortening for solid fat, non-fat dry milk (made into whole milk) for whole milk or buttermilk.

- The three types of quick breads. Mixes could be used.

  -- Drop batter for muffin or biscuit.

  -- Pour batter for pancake or waffle.

  -- Dough for rolled biscuit, dumplings, or cobblers.

- Preheating of oven or top-of-stove bake pan.

. Have aides examine the baked products and point out indications of good quality.

- Mention that batters and doughs may be frozen_baked, or unbaked.

- Show filmstrip "Better Biscuit" or "Muffin Making" as summary to the lesson.

APPLICATION OF LESSON BY AIDES

Aides make quick breads for their families using minimum of equipment.

Aides make bread by using some improvised measuring equipment in order to help homemakers who do not have standard measuring equipment.

Aides make quick bread from prepared mix.

REFERENCES FOR TRAINER AGENT

1. Food For Us All, Yearbook of Agriculture, 1969, pp. 213-225.
2. Food, Yearbook of Agriculture, 1959, pp. 549-554.
3. Handbook of Food Preparation, AHEA.
4. Foods, Vail, Griswold, Justin, and Rust, pp. 315-327.
5. Baking Basics, Self Rising Flour and Corn Meal Program, Inc.

VISUALS AND EQUIPMENT

Food and supplies for food preparation.

Commercial quick bread mix boxes.

"Better Biscuit" or "Muffin Making," filmstrips, General Mills, Inc.

Pictures of prepared quick breads.

REFERENCES FOR AIDES

1. Master Mix Recipe Handout, prepared by agent.
2. Food preparation sheets, camera copy, C&MS and FNS, USDA.
3. Family Fare, G-1, USDA.
4. Budget Saving Recipes, The Quaker Oats Company.

5. Family Meals at Low Cost, PA-472, USDA.

6. Betty Crocker leaflets on quick breads, General Mills, Inc.

7. Enriched All-Purpose Flour, a good choice for the thrifty family, FNS-30.

8. Nutrient content label on commercial and USDA donated flours.

FOOD PREPARATION

Lesson 19: YEAST BREADS

PURPOSE

Trainer agent to help aides:

1. Learn to prepare yeast breads with little equipment.

2. Understand the principles of yeast bread preparation.

PRESENTATION

. Discuss problems encountered in teaching homemakers to make breads. See Lesson 18.

. Explain how yeast breads differ from quick breads.

. Discuss the principles of yeast bread preparation:

- As the dough is mixed, the liquid is distributed evenly and stimulates the yeast growth.

  -- Too much liquid weakens the dough so that it lacks the strength for stretching (rising).

  -- Milk, a good liquid for yeast growth, adds nutritive value, flavor, and color, and gives a finer grain than water.

- Yeast (a plant) feeds upon the sugar and starch in the dough and gives off a gas carbon dioxide, which expands the framework of the dough as it rises. This process is called fermentation. Yeast is a rich source of B vitamins.

- Thorough mixing and kneading gives a smooth, elastic dough that is necessary for good bread.

  -- Undermixed or overmixed doughs produce coarse or compact breads.

- To use yeast efficiently and to get a good quality bread, yeast doughs should be set to rise in a warmer than average room temperature (74^0 - 90^0).

-- Too much heat kills yeast; cold temperatures slow growth.

- As dough rises the framework becomes thinner and weaker.

  -- Overrising causes bread to have a coarse texture, poor volume, and sour odor. Underrising gives a compact tough bread.

. Demonstrate the principles of yeast bread making by preparing one or more basic yeast breads. Emphasize:

  - Measurement of only essential ingredients.

  - No-sift flour method.

  - Use of dry milk and dry yeast.

  - Ways for judging temperature of liquid and rising place for dough and baking space for bread.

  - Methods of kneading. Show tests for adequate kneading.

  - Finger test for adequate rising.

  - Punching down and shaping dough. Show short cuts in shaping rolls.

  - That bread and rolls may be frozen as partially baked, or completely baked. Doughs may also be frozen.

. Discuss variations that might be made from the basic yeast bread recipe used in the demonstration.

  - Point out that rolls and sweet doughs are usually made with greater amounts of sugar, fat, and eggs.

. Mention other yeast bread variations such as:

  - Sour dough and batter breads.

  - Cornmeal, whole wheat, and self-rising flour yeast breads.

. Show the filmstrip, "Breads You Bake With Yeast."

. Look at the quality of the bread baked in the demonstration.

. Have aides discuss the bread-making procedure used in the demonstration. Plan changes needed for use with homemakers.

APPLICATION OF LESSON BY AIDES

Aides make yeast breads.

Aides help homemakers learn to make yeast breads.

REFERENCES FOR TRAINER AGENT

1. Food, Yearbook of Agriculture, 1969, pp. 221-222.
2. Fleischmann Treasury of Yeast Baking, Standard Brands Inc.
3. Baking Basics, Self-Rising Flour and Corn Meal Program, Inc.

VISUALS AND EQUIPMENT

Food and supplies for food preparation.

"Breads You Bake With Yeast," filmstrip, General Mills, Inc.

Pictures of yeast breads.

REFERENCES FOR AIDES

1. Budget Saving Recipes, The Quaker Oats Company.
2. Family Fare, G-1, USDA.
3. Cool Rise Method, Fact sheet, International Milling Company, Inc.
4. Betty Crocker leaflets on yeast breads, General Mills Inc.
5. How to Make Basic White Bread, Fact sheet, Standard Brands Inc.
6. Enriched All-Purpose Flour, a good choice for the thrifty family, FNS-30.
7. Nutrient content label on USDA donated and commercial flours.

FOOD PREPARATION

Lesson 20: FROZEN DESSERTS AND SALADS

PURPOSE

Trainer agent to help aides:

1. Learn the principles of preparing foods for freezing.

2. Become acquainted with several types of frozen foods.

PRESENTATION

- Discuss reasons why frozen foods are popular with all age groups.

- Name and describe well-liked frozen desserts and salads. Display pictures of some considered easy to prepare and inexpensive.

- Discuss the principles of freezing prepared foods.

  - Frozen foods contain ice crystals. The smaller the crystal, the better the quality of the frozen product. Many things determine the size of the ice crystals.

    -- Rapid freezing produces a small crystal.

    -- Folding in of air as in beaten egg white, whipped cream or milk, or beating of the mixture itself results in small crystals.

    -- Stirring gives a small crystal - unless air is stirred out (example - after beaten egg white has been folded in.) Scraping of small ice crystals from the sides of the container speeds up freezing and gives a smoother product.

    -- Frozen desserts and salads with high fat or oil content may not require stirring during freezing but are high in calories.

    -- Stabilizers as gelatin, cream, commercial ice cream mix, acid fruits and juices, help prevent the formation of large crystals.

    -- Sugar in too large amounts lowers the freezing temperature and may prevent freezing.

    -- Fruits in large pieces may freeze as ice.

-- Some nuts discolor cream mixtures.

-- Salad dressing other than mayonnaise should be used in frozen salad as mayonnaise tends to separate during freezing.

- Point out that frozen desserts require more flavoring than similar mixtures that are not to be frozen.

- Mention that expansion space must be allowed to prevent overrun.

. Have aides prepare simple salads and desserts for freezing.

. Have aides look through cookbooks and references to find simple recipes for frozen desserts and salads.

. Serve and judge the quality of the foods prepared.

APPLICATION BY AIDES

Aides make frozen desserts and salads.

Aides teach homemakers to make frozen desserts and salads.

REFERENCES FOR TRAINER AGENT

1. Foods, Vail, Griswold, Justin, and Rust, pp. 384-390.

2. Cookbooks.

VISUALS AND EQUIPMENT

Pictures of frozen salads and desserts.

Food and equipment needed for food preparation.

Cookbooks.

REFERENCES FOR AIDES

1. Ice Cream and other information sheets, National Dairy Association.

2. Family Fare, G-1, USDA.

FOOD PREPARATION

Lesson 21: THE PACKED MEAL

PURPOSE

Trainer agent to help aides:

1. Recognize uses of the packed meal.
2. Learn how to prepare a variety of low cost foods for packed meals.
3. Become aware of safety measures to follow in preparing packed meals.
4. Learn to use inexpensive and no-cost wrappings and containers for packed meals.

PRESENTATION

- Discuss uses of the packed meal.
  - As lunch at school when hot lunches are unavailable.
  - As snack or meal for a family member working away from home.
  - For picnic or family outing.
  - By family member on a special diet.
- Display a meal packaged for work or play. Discuss the desirable characteristics of a packed meal:
  - Satisfying.
  - Attractive.
  - Easy to eat.
  - Cost within the food budget.
  - Easy to carry.
- Emphasize that the packed meal must include its share of the day's food needs - protein, carbohydrates, fats, minerals, and vitamins.

. Using the display meal, pictures, and supplies point out that:

- A variety of less-expensive foods is possible in a packed meal.

- Variety in foods can be seasonal (example - fresh tomato in summer.)

- Appropriate inexpensive containers and wrapping materials are available. Discuss costs of packaging materials and containers.

- The packed meal can be as nutritious yet cost less than many meals eaten away from home.

. Discuss factors to consider when planning a packed meal:

- The place where the meal will be eaten. Can the meal be refrigerated until eaten? Can beverages be bought or food heated at the eating site?

- Very rich or highly seasoned foods are likely to create thirst or drowsiness or leave an offensive taste.

- Variety of sweet, tart, crisp, and soft foods adds to eating enjoyment.

- Hot and cold foods provide variety and stimulate the appetite.

- Some foods can be prepared in quantity and frozen in serving sizes for packing in meals.

. Emphasize safety measures to follow in prepared packed meals.

- Plan foods that keep well.

- Handle food as little as possible in preparation.

- Hold foods no longer than necessary before eating unless they are canned or frozen.

. List foods that keep well in packed meals. Mention some foods that are easily contaminated and are likely to spoil.

. Discuss ways to include the following foods in packed meals(consider safety, cost, and convenience):

- Hot beverages and soups.

- Meats and eggs.

- Salads.
- Fruit and vegetables.
- Milk.
- Desserts.

. Demonstrate the preparation of some foods for packing (use inexpensive or no-cost packaging materials):

- Soft foods such as sandwiches and crisp foods such as cookies.
- Wet or liquid foods such as pickles and canned fruit.
- Raw vegetables and cut fruit.
- Insulated wrapping of hot and cold foods.

. Show how to place food in the carrying container to preserve quality and flavor of the food.

- Sandwiches on edges.
- Heavy items on the bottom.
- Cold items close together.

. Demonstrate how to clean and air lunch boxes and beverage containers.

APPLICATION OF LESSON BY AIDES

Aides pack meals for family picnics, work, or school.

Aides help homemakers plan interesting packed meals.

REFERENCES FOR TRAINER AGENT

1. Food For Us All, The Yearbook of Agriculture, 1969, pp. 62-64.
2. Food, Yearbook of Agriculture, 1959, pp. 5[illegible].
3. Sandwiches, American Institute of Baking.
4. Protecting Our Food, Yearbook of Agriculture, 1966, pp. 181-185.

VISUALS AND EQUIPMENT

Foods, packaging materials, and improvised food kits.

REFERENCES FOR AIDES

Keeping Food Safe to Eat, G-162, USDA.

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